

REMARKS

This Response is submitted in reply to the non-final Office Action mailed on April 5, 2005. The Director is authorized to charge or credit any additional fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 4687553-043 on the account statement.

Claims 1-20 are pending in this application. In the Office Action, Claims 1, 3-14 and 16-20 are rejected under 35 U.S.C. §112, first paragraph, Claims 21-25 are rejected under 35 U.S.C. §112, second paragraph, Claims 1-5 and 11-20 are rejected under 35 U.S.C. §102, Claims 1-6 and 10-20 are rejected under 35 U.S.C. §103 and Claims 2-20 have been provisionally rejected under 35 U.S.C. §101. For the response set forth below, Applicants respectfully submit that the rejections should be withdrawn.

In the Office Action, Claims 1, 3-14 and 16-20 are rejected under 35 U.S.C. §112, first paragraph, for allegedly failing to comply with the enablement requirement. Regarding Claim 5, the Patent Office alleges that the specification does not reasonably provide enablement for any and all amounts and any and all mediums. Applicants respectfully submit that Claim 5 is enabling because Claim 5 is dependent on Claim 1 that states that an effective amount of a flavor attribute is added. Accordingly, a person having ordinary skill in the art would have no difficulty practicing the present claim. In addition, the flavor attributes shown in the specification at page 4 and are non-limiting examples. The specification also teaches ranges for a flavor effective amount, for example, beginning at page 3, line 33, which states that "[t]he amount of flavor attribute added to the chocolate mass may be determined according to requirements and may be up to 10% by weight. For example, the amount of flavor added may be conveniently from 0.001% to 5%, preferably from 0.01% to 4%, more preferably from 0.1 to 2.5% and especially from 0.2% to 2% by weight based on the weight of the chocolate mass." As a result, one having ordinary skill practice Claim 5 without undue experimentation.

Regarding Claims 7-8, the Patent Office alleges that the specification does enable any person skilled in the art to practice these claims. In response, Applicants respectfully submit that a flavor attribute that is an enzymatic hydrolysate of a cocoa polysaccharide (Claim 7) and a flavor attribute that is a malty crumb flavor obtained by acid treatment of a cocoa liquor followed by a protease treatment are both within the capabilities of one having ordinary skill in the art.

Applicants do not need to list every possible enzymatic hydrolysate or acid treatment because these are understood by the skilled artisan (e.g. in the food/confectionery industry). In fact, a patent need not teach, and preferably omits, what is well known in the art. See, MPEP 2164.01. As a result, one having ordinary skill could make and use Claims 7-8 without undue experimentation.

With regard to Claims 1, 3-14 and 16-20, Applicants respectfully submit that these claims are enabling because one having ordinary skill in the art would have no difficulty in determining what flavor attributes are required because the specification provides clear teaching as to relevant flavor attributes and their characteristics. See, specification, page 4. Further, as discussed previously, the flavor attributes shown at page 4 are non-limiting examples and the skilled artisan could reasonably understand what other flavor attributes can be used in accordance with the present claims. As a result, one having ordinary skill could practice Claims 1, 3-14 and 16-20 without undue experimentation.

Based on at least these noted reasons, Applicants believe that Claims 1, 3-14 and 16-20 fully comply with 35 U.S.C. §112, first paragraph. Accordingly, Applicants respectfully request that the rejection of Claims 1, 3-14 and 16-20 under 35 U.S.C. §112, first paragraph, be withdrawn.

In the Office Action, Claims 21-25 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 22-25 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Applicants respectfully submit that the current application only has pending Claims 1-20. Nevertheless, if the Patent Office is referring to currently pending Claims 16-20, Applicants respectfully submit that the term “house flavor” is described in the specification, for example, at page 2, lines 15-17 that states “[s]ome manufacturers produce chocolate by using chocolate ingredients and a process which only gives one flavour attribute to give a specific house flavour.” The term “flavor attribute” is defined in the specification, for example, at page 2, lines 30-33 to mean a consumer-recognisable flavour attribute associated with chocolate and not the mere enhancement of the chocolate flavour, e.g. by adding vanilla, or a different overriding,

dominant flavour such as peppermint. Accordingly, Applicants respectfully submit that in view of the specification the term "house flavor" is clear to one having ordinary skill in the art.

Applicants also respectfully submit that one having ordinary skill in the art would understand in view of the specification how the chocolate flavor process leads to asset utilization, cost reduction and recipe flexibility. For example, Applicants have surprisingly found that by adding the desired non-cocoa and/or milk/dairy flavor attribute to the chocolate mass, it is possible to manipulate the flavor associated with chocolate of the chocolate by adding the desired flavor attribute to a single chocolate mass irrespective of the process of preparation of the chocolate mass, the formulations and the ingredient origins. Thus, a single manufacturing plant will become far more flexible and able to produce a full range of flavors. As a result, one having ordinary skill would understand that Applicants had possession of Claims 16-20 at the time of filing in view of the specification.

In the Office Action, Claims 21-25 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Patent Office alleges that Claim 1 is directed to a non-cocoa flavor and Claims 6-8 are directed to a cocoa flavor. Applicants respectfully submit that Claim 1 is directed to manipulating the flavor of a single mass of chocolate using a non-cocoa/dairy flavor attribute. These non-cocoa/dairy flavor attributes can be made by the processes recited in Claims 6-8, which can use cocoa liquor technology (Claim 6), cocoa polysaccharide (Claim 7) or cocoa liquor (Claim 8) be modified to have flavors other than cocoa. For example, the acid treatment of the cocoa liquor according to Claim 8 results in a malty crumb flavor. As a result, one having ordinary skill would clearly understand the scope of Claims 6-8.

Based on at least these noted reasons, Applicants believe that Claims 6-8 and 16-20 fully comply with 35 U.S.C. §112, first and second paragraphs. Accordingly, Applicants respectfully request that the rejection of Claims 6-8 and 16-20 under 35 U.S.C. §112 be withdrawn.

In the Office Action, Claims 1-5 and 11-20 are rejected under 35 U.S.C. §103(a) as anticipated by GB 2,033,721 to Ripper ("*Ripper*") in view of U.S. Patent No. 2,835,590 to *Rusoff* ("*Rusoff*"). Claims 1-4, 6 and 10-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Ripper* in view of U.S. Patent No. 3,769,030 to Kleinert ("*Kleinert*") or U.S. Patent No.

5,676,993 to Watterson ("*Watterson*"). Applicants respectfully disagree with and traverse these rejections for at least the reasons set forth below.

The present claims are directed, in part, to a process for manipulating the flavor of a single mass of chocolate which comprises, for example, adding a flavor effective amount of a non-cocoa/dairy flavor attribute to the chocolate mass thus manipulating its flavor. It should be pointed out that in the present claims, the chocolate is made by a standard process using conventional ingredients well known to persons skilled in the art. For example, this is described in the specification in the second paragraph of the "Background to the Invention," which states "[c]hocolate is generally obtained by mixing sugar and cocoa butter with cocoa liquor or cocoa nibs, followed by refining, conching and tempering. Milk chocolate is prepared in a similar way but with the addition of milk. One traditional method of producing milk chocolate (dry process) is by mixing milk powder together with cocoa liquor or cocoa nibs, sugar, and cocoa butter, followed by refining, conching and tempering. Another traditional method of producing milk chocolate (wet process) is by condensing and drying either liquid milk or milk concentrate together with sugar with or without cocoa liquor normally under vacuum and at elevated temperatures to produce a chocolate crumb powder and then mixing the chocolate crumb powder with cocoa butter, cocoa liquor, followed by refining, conching and tempering. Optionally, the cocoa butter may be partially or totally replaced by direct cocoa butter replacements, stearines, coconut oil, palm oil, butter or any mixture thereof to give substitute chocolate materials which are generally referred to as compound, couvertures or ice cream coatings. In this invention, the term "chocolate" includes standard chocolate as well as substitute chocolate such as compound, couvertures or ice cream coatings."

The mixture containing sugar, cocoa butter, cocoa liquor or cocoa nibs, and milk (if a milk chocolate is made) is referred to as the chocolate mass. The amounts of sugar, cocoa butter, cocoa liquor or cocoa nibs, and milk (if a milk chocolate is made) present in the chocolate mass may vary within certain limits which are well known to those skilled in the art. Approximate amounts of the main ingredients for dark chocolate are 40% cocoa liquor, 45% sugar and 15% added cocoa butter, and for milk chocolate they are 16% cocoa liquor, 14% milk powder, 45% sugar and 25% added cocoa butter. There are also variations in the process which are also well

known to persons skilled in the art. These variations give rise to specific consumer-recognisable flavours.

The Background to the Invention further recites “[l]ocal chocolates are often unique and contain flavours that are important for the consumer and it has been known for many years to add flavours to chocolate. This is done for two reasons, firstly, modification or enhancement of the cocoa or dairy flavour, e.g. to give a rounded smoothness to the profile or to create a creamy note, which is usually done by adding up to 0.2% of vanilla, vanillin, ethyl vanillin, etc., and secondly, to impose a different, overriding, dominant but compatible flavour, e.g. by adding orange oil, peppermint oil, strawberry, raspberry, etc.

It is well known that there are a large number of different consumer-recognisable flavour attributes associated with chocolate, other than the mere enhancement of the chocolate flavour or a different overriding, dominant flavour, which *vary* considerably around the world according to local consumer preferences. These flavour attributes of chocolate products are determined by variations in the process and the amounts of the normal ingredients used in chocolate manufacture, e.g. cocoa and milk. These flavour attributes may be, for example, roasted, sweet, bitter, crumb, caramel, fruity, floral, biscuit, bouquet, spicy, scented, baked, bready, cereal, popcorn, malty, astringent and praline. Such flavour attributes are well-known in the cocoa trade where they form part of the vocabulary. Consequently, local chocolates are often unique and contain flavour attributes that are important for the consumer.

Some manufacturers produce chocolate by using chocolate ingredients and a process which only gives one flavour attribute to give a specific house flavour and the manufacturing plants are only able to produce a limited variation around this flavour. However, for a chocolate product containing chocolate and another ingredient, e.g. a chocolate biscuit or a product comprising a centre coated with chocolate, it is important to match the chocolate flavour attribute with the flavour intensity type of the other ingredient. For example, a cooked chocolate flavour attribute is desirable for a chocolate biscuit, a strong cocoa flavour attribute is required to offset a mint flavour intensity type whereas only a mild flavour attribute is required for praline which has a low intensity flavour. It would be very desirable to be able to manipulate the flavour associated with chocolate produced by a single process to obtain a flavour attribute of one's choice by adding the desired flavour attribute to a single chocolate mass irrespective of the

process of preparation of the chocolate mass, the formulations and the ingredient origins. This would lead to the operation of a highly flexible chocolate plant..... By "flavour attribute" in this invention, we mean a consumer-recognisable flavour attribute associated with chocolate, and not the mere enhancement of the chocolate flavour, e.g, by adding vanilla, or a different overriding, dominant flavour such as peppermint." (emphasis added.)

Applicants have surprisingly found that these flavor attributes are not always associated with cocoa and/or milk/dairy flavors and that they may be obtained by adding non-cocoa and/or milk/dairy flavors. The actual amount of flavour attribute added will vary depending on the circumstances and the desired flavour required according to market requirements. The actual amount of flavour attribute added may be from 0.001% to 10% by weight based on the weight of the chocolate mass.

With respect to *Ripper*, there are two important differences between *Ripper* and the present claims. First, *Ripper* fails to disclose or suggest any method of manipulating the flavor of chocolate by adding an effective amount of a non-cocoa/dairy flavor attribute as recited, in part, in the present claims to the chocolate mass. Although *Ripper* discloses the addition of flavours in the Examples for milk chocolate and plain chocolate, a person having ordinary skill in the art would assume, in the absence of any teaching to the contrary, that the added flavours are conventionally added flavors as stated above in connection with the Background to the Invention and are 1) for the modification or enhancement of the cocoa or dairy flavour, e.g, to give a rounded smoothness to the profile or to create a creamy note, which is usually done by adding up to 0.2% of vanilla, vanillin, ethyl vanillin, etc., and 2) to impose a different, overriding, dominant but compatible flavour, e.g, by adding orange oil, peppermint oil, strawberry, raspberry, etc. As stated above, by the term "flavour attribute" in the present invention, Applicants mean a consumer-recognisable flavour attribute associated with chocolate and not the mere enhancement of the chocolate flavour, e.g, by adding vanilla, or a different overriding, dominant flavour such as peppermint,

Second, although *Ripper* discloses a method for the manufacture of chocolate, the object of *Ripper* is to avoid the conching step which is normally carried out during traditional chocolate manufacture. This contrasts with the present claims where several traditional methods of making chocolate are described in the Background of the Invention, all of which involve conching. The

specification further states in the Background of the Invention that "[i]n this invention, the term "chocolate" includes standard chocolate as well as substitute chocolate such as compound, couvertures or ice cream coatings." This clearly means a standard or substitute chocolate made by traditional methods which involve a conching step. Therefore, *Ripper* fails to anticipate the novelty of any of the present claims.

The present claims also involve an inventive step because the problem to be solved in *Ripper* is to provide a quicker method of making chocolate and to avoid a conching step. In contrast, a problem that the present claims set out to solve is to manipulate the flavour associated with chocolate produced by a single process to obtain a flavour attribute of one's choice by adding the desired flavour attribute to a single chocolate mass irrespective of the process of preparation of the chocolate mass, the formulations and the ingredient origins. In *Ripper*, there is no disclosure of manipulating the flavour of chocolate by adding an effective amount of a non-cocoa/dairy flavor attribute as recited in the present claims to the chocolate mass. It is highly unlikely that a person skilled in the art, looking for a solution to the problem of the present claims, would turn to the teaching of *Ripper*, which relates to an entirely different problem.

Rusoff is also deficient with respect to the present claims. For example, *Rusoff* differs from the present claims because *Rusoff* is concerned with preparing a clutched chocolate flavouring material. As is well known to persons skilled in the art clutching is a treatment used during the making of cocoa powder to give particles better suspension properties when they are used in a drink. See "Industrial Chocolate Manufacture and Use", edited by S.T. Beckett, page 391, (Second Edition, 1994, Blackwell Science). Examples of such drinks are given in *Rusoff* at column 1, lines 24-26 as being chocolate milk and carbonated and non-carbonated chocolate beverages. *Rusoff* extracts the flavor precursors from cocoa material and clutches the precursors whereupon the clutched precursors are either added to milk to give a chocolate beverage (see last paragraph of Example 1) or to a carbonated beverage (see Example 2, column 7, lines 59-63).

In contrast to *Rusoff*, the present claims are not concerned with flavouring chocolate drinks but rather relate to manipulating the flavor of a single mass of chocolate which comprises adding a flavor effective amount of a non-cocoa/dairy flavor attribute to the chocolate mass to thus manipulate the flavor of the mass. *Rusoff* uses the flavour precursors that have been removed from the cocoa to flavour a chocolate drink. As a result, there is a clear difference

between *Rusoff* and the present claims, and *Rusoff* fails to anticipate any of the present claims. In fact *Rusoff* teaches away from the present claims.

There are three important differences between *Kleinert* and the present claims. First, *Kleinert* fails to disclose or suggest any method of manipulating the flavor of chocolate by adding an effective amount of a non-cocoa/dairy flavor attribute to the chocolate mass as required by the present claims. Although *Kleinert* discloses the addition of flavors, a person skilled in the art would assume, in the absence of any teaching to the contrary, that the added flavours are conventionally added flavors as stated above in connection with the Background to the Invention and are first, for the modification or enhancement of the cocoa or dairy flavour, e.g. to give a rounded smoothness to the profile or to create a creamy note, which is usually done by adding up to 0.2% of vanilla, vanillin, ethyl vanillin, etc., and second, to impose a different, overriding, dominant but compatible flavour, e.g. by adding orange oil, peppermint oil, strawberry, raspberry, etc. As discussed previously, by the term “flavour attribute” in the present claims, Applicants mean a consumer-recognisable flavour attribute associated with chocolate and not the mere enhancement of the chocolate flavour, e.g. by adding vanilla, or a different overriding, dominant flavour such as peppermint.

Second, *Kleinert* discloses a process for the fabrication of chocolate, especially milk chocolate, wherein (a) cocoa is deodorized, (b) a carbohydrate-protein-additive mixture or carbohydrate-protein-additive-cocoa-mixture moistened with a carbohydrate solution is brought into reaction in at least one reactor at a temperature exceeding 50°C in order to form specific flavor and taste substances, the offensive smell and undesired volatile reaction products removed from the reaction mixture, and the reaction mixture is dried. Temperatures up to 150°C are used in the process. While adding cocoa butter, the cocoa treated according to step (a) is admixed with the carbohydrate-protein-additive-mixture or carbohydrate-protein-additive-cocoa-mixture treated according to step (b), plasticized and/or thinned, finely comminuted, and thereafter through the addition of fat and emulsifying agents is imbued or wetted with the fat phase and homogenized in a liquified condition. In *Kleinert*, the flavour and taste substances prepared in step (b) are added to only some of the ingredients of chocolate, viz. the cocoa butter and the deodorised cocoa of step (a) and not to the chocolate mass as disclosed in the present claims.

The chocolate mass of the present claims may be, for example, a standard chocolate such as dark, milk, white chocolate or it may be a compound or ice cream coating, i.e. the mass consists of all the ingredients of chocolate, i.e. cocoa, cocoa butter, sugar, and optionally milk for milk and white chocolate. In addition, since the amount of sugar (carbohydrate) present in chocolate is usually about 40% to 50%, the amount of the specific flavour and taste substances prepared in step (b) of *Kleinert* added to the cocoa is much greater than the amount of flavour attributes added in the process of the present invention which is from 0.001% to 10%.

Third, *Kleinert* relates to a method for the fabrication of chocolate paste, especially milk chocolate paste, wherein cocoa is deodorized and the paste obtained by incorporating the deodorized cocoa is finished without conching. The aim of *Kleinert* is to avoid the conching step which is normally carried out during traditional chocolate manufacture. This contrasts with the present invention where on page 1 of the specification, in the first two paragraphs of the Background of the Invention, several traditional methods of making chocolate are described, all of which involve conching. Further, as recited in the specification, the term "chocolate" includes standard chocolate as well as substitute chocolate such as compound, couvertures or ice cream coatings. This clearly means a standard or substitute chocolate made by traditional methods which involve a conching step. As a result, *Kleinert* fails to disclose or suggest any of the present claims.

The present claims also involve an inventive step over *Ripper* in view of *Kleinert* because the problem to be solved in both *Ripper* and *Kleinert* is to avoid a conching step. In contrast, the problem that the present invention sets out to solve is to manipulate the flavour associated with chocolate produced by a single process to obtain a flavour attribute of one's choice by adding the desired flavour attribute to a single chocolate mass irrespective of the process of preparation of the chocolate mass, the formulations and the ingredient origins. In *Kleinert*, there is no disclosure of manipulating the flavour of chocolate by adding an effective amount of a non-cocoa/dairy flavor attribute to the chocolate mass as required by the present claims. It is most unlikely that a person skilled in the art, looking for a solution to the problem of the present invention, would turn to the teaching of *Kleinert* which relates to an entirely different problem.

Watterson discloses a process for enhancing cocoa flavour in a fat matrix. As stated in *Watterson* in the two paragraphs immediately preceding the Summary of the Invention, "[t]he

best chocolates are produced from the highest flavor quality cocoa beans. However, the highest quality cocoa beans can also be the most expensive, while the poorest quality cocoa beans are less expensive. In order to reduce the costs of manufacturing chocolate, it would be desirable to enhance cacao flavor in order to utilize more of the less expensive beans without sacrificing flavor quality. This is one of the main objectives of the present invention. The present inventors have found such a system that has considerably enhanced the cacao flavor of chocolate liquor produced from cocoa beans of lower flavor quality."

In contrast to *Watterson*, the present claims are concerned with manipulating the chocolate flavour as stated in the paragraph immediately preceding the Summary of the Invention, which states "[w]e have found, surprisingly, that by adding the desired non-cocoa and/or milk/dairy flavor attribute to the chocolate mass, it is possible to manipulate the flavor associated with chocolate of the chocolate by adding the desired flavor attribute to a single chocolate mass irrespective of the process of preparation of the chocolate mass, the formulations and the ingredient origins. Thus a single manufacturing plant will become far more flexible and able to produce a full range of flavors." In addition, as discussed previously, the term "flavour attribute" means a consumer-recognisable flavour attribute associated with chocolate and not the mere enhancement of the chocolate flavour.

The problem to be solved by *Watterson* is different to that of the present invention and therefore Applicants believe that the present claims involve an inventive step over *Ripper* which describes a chocolate making process which avoids a conching step in view of *Watterson* which is directed to enhancing the flavour, particularly because there is no suggestion in *Ripper* of using cocoa beans of inferior quality. Consequently, a person skilled in the art would not see any incentive to enhance the flavour of *Ripper* because *Ripper* teaches that the chocolate products produced by his process have a satisfactory flavour. For at least the reasons discussed above, the combinations of *Ripper* in view of *Rusoff*, *Kleinert* or *Watterson* do not teach, suggest, or even disclose the present claims, and thus, fail to render the claimed subject matter obvious.

Accordingly, Applicants respectfully request that the obviousness rejections with respect to Claims 1-6 and 10-20 be reconsidered and the rejections be withdrawn.'

In the Office Action, Claims 2-20 have been provisionally rejected under 35 U.S.C. §101 as allegedly claiming the same invention as that of Claims 1-25 of Application No. 10/819,180.

Applicants respectfully submit that Claims 1-25 of U.S. Patent Application No. 10/819,180 are distinguishable from the currently pending Claims. For example, Claims 1-25 of Application No. 10/819,180 are directed to, in part, a process for manipulating the flavor of a single mass of chocolate which comprises first reducing or removing natural flavor from chocolate ingredients or the chocolate mass and then adding a flavor effective amount of a flavor attribute to the chocolate mass to thus manipulate the flavor of the mass. Claims 1-20 of the current application are directed, in part, to a process for manipulating the flavor of a single mass of chocolate which comprises adding a flavor effective amount of a non-cocoa/dairy flavor attribute to the chocolate mass thus manipulating its flavor. As a result, the present claims do not require reducing or removing natural flavor from chocolate ingredients as taught by Claims 1-25 of Application No. 10/819,180 and are distinguishable for at least these reasons.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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